

ABSTRACT OF THE DISCLOSURE

[0085] A method and apparatus for high-resolution 3D imaging ladar system which can penetrate foliage and camouflage to sample fragments of concealed surfaces of interest is disclosed. Samples collected while the ladar moves can be integrated into a coherent object shape. In one embodiment, a system and method for automatic data-driven registration of ladar frames, comprises a coarse search stage, a pairwise fine registration stage using an iterated closest points algorithm, and a multi-view registration strategy. After alignment and aggregation, it is often difficult for human observers to find, assess and recognize objects from a point cloud display. Basic display manipulations, surface fitting techniques, and clutter suppression to enhance visual exploitation of 3D imaging ladar data may be utilized.